of the public by Dr. Clayton, who, under the supposition that it was a fungus belonging to the same order as puff-balls, sent it to Gronovius under the name of *Lycoperdon solidum*, and, as such, described it in the Flora Virginica. This was about one hundred and forty years ago. Next it was described by Schweinitz, in his Synopsis of the Fungi of North Carolina, under the name of *Sclerotium cocos*, and by Fries, in his Systema Mycologicum, under the name of *Pachyma cocos*. At about the time Schweinitz described it, Dr. Macbride, of South Carolina, communicated to the Linnaean Society of London his own observations on the supposed fungus. The late Dr. Torrey, unaware of the fact that he had been anticipated by Schweinitz, described the production, about the year 1819, in the New York Repository, under the name of *Sclerotium giganteum*, and also published the results of a chemical analysis of it. Dr. Torrey ascertained that, while chemical tests failed to detect the presence of starch (which the microscope had also failed to show), the mass consisted almost entirely of a singular substance which he called sclerotine. Braconnot, some years after this, described the same principle (which in some of its modifications is the jelly of fruits) as pectine. Tuckahoe, possessing no cellular structure, no mycelium and no trace of fructification, was long ago removed from among the fungi, and is now considered by the Rev. M. J. Berkeley and other mycologists as a secondary product, caused by the degeneration of the tissues of some flowering plant, in which a change has occurred similar to that which converts animal tissue into adipocere, and in which the cellulose and all other principles are transformed into a body of the pectose group. This, however, is conjecture merely, against the probable truth of which is the fact that no intermediate states have been found, while none, large or small, presents any trace of plant-structure. Owing to the fact that it is sometimes found attached to the roots of trees, especially those of the fir, Currey and Keller consider it to be an altered state of these occasioned by the presence of a fungus, the mycelium of which traverses, disintegrates, and even obliterates the bark. This view seems to be sustained by the analyses of R. T. Brown (1871) and J. L. Keller (1876). The former found it to be composed of water, 14 per cent.; glucose, 0.93 per cent.; gum, 2.63 per cent.; pectose, 64.45 per cent.; cellulose, 17.34 per cent.; ash, 0.16 per cent., and nitrogen only 0.36 per cent. Keller found 77.27 per cent. of pectose; 3.76 per cent. of cellulose; 3.64 per cent. of ash, and other things in about the same proportion as Brown did. Owing to its chemical composition, the tuckahoe is very nutritious, and was from early times used as a food by the Indians, as implied in its common names "Indian bread" and "Indian loaf." It is also said to be employed, boiled in milk, as a substitute for arrowroot in summer complaints, in the Southern States.

A product which is thought to be the same as tuckahoe grows in China, and is sold as food in the streets of Shanghai under the name of füh-ling. An account of this is given by the Rev. M. J. Berkeley in the Proceedings of the Linnaean Society of London.)

Arthrocladia villosa, Duby.—Dr. Farlow records that this rare and interesting alga was first found on the New England coast by

Mr. F. S. Collins at Falmouth Heights, Mass. Since then, two other collectors have obtained it in the vicinity of East Falmouth, in the waters of Vineyard Sound, at a place called Menauhant; viz., Rev. G. W. Perry of Auburn, Me., in the summer of 1881, and Mrs. H. L. Chambré of Fall River, Mass., in 1882.

These constitute the third and fourth recorded instances of its occurrence on the American coast. It was first found by Mr. Charles Congdon more than thirty years ago, cast ashore at Smithville near Wilmington, N. C. This specimen was figured and described by Harvey in the first volume of the "Nereis."

It had, however, been previously identified by Prof. J. W. Bailey, who received it from Mr. Hooper of Brooklyn, along with fifty or more other plants. I am fortunate enough to have the letter of Prof. Bailey to Mr. Hooper in which he makes report of his study of this lot of specimens. For sufficient reasons, he does not appear to have satisfactorily determined many of them, so he writes:

"You will see by the above how blind a guide I am in the path you have entered. I try to console myself for my incapacity, by saying that most of the specimens sent which I am in doubt about are not in a perfect and fully-developed condition, and that others are decidedly new, or, at any rate, not like anything in my herbarium.

I have worked hard at these specimens, have dissected every one of them, and compared them with everything which they at all resemble, and yet how few I have made out! However, I am paid for my labors by making out that curious plant M. 1. which beyond *any* doubt is the *Arthrocladia villosa* of Duby, a very rare plant and new to the American flora." As little confidence as Prof. Bailey felt in his knowledge of algae, he was about the only American who, at that time, knew anything at all about them.

Taunton, Mass. A. B. HERVEY.

Rosa minutifolia. — Through the kind exertions of Miss F. Fish of Sauzal, mature fruit of this interesting species, described in the August number of the BULLETIN, has been obtained and is being widely distributed, so that we may hope soon to see it in cultivation. The fruit is globose, crowned with the persistent erect calyx-lobes, deeply red-brown, bristly-hispid; seeds generally few, bearing the woolly, at length deciduous style.

In the description of the flower it ought to have been mentioned that the outer calyx-lobes are pinnatifid, which however is alluded to at the end of the article. The locality is Sauzal, not Sanyal as printed.

GEORGE ENGELMANN.

Epipactis Helleborine, the orchis new to America, which was found near Syracuse in 1879, has been discovered growing in considerable quantity (100 to 200 individuals) on a wooded slope of Scajaquady's Creek, in the northerly part of this city. A specimen has been sent to Dr. Gray, who, while pronouncing it to be identical with the Syracuse plant, declares that he can discover no valid dis-